



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,295	07/03/2003	Yutaka Takano	SE-US035026	3180
22919	7590	06/24/2005	EXAMINER	
SHINJYU GLOBAL IP COUNSELORS, LLP 1233 20TH STREET, NW, SUITE 700 WASHINGTON, DC 20036-2680			SHAH, MANISH S	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/612,295

Applicant(s)

TAKANO, YUTAKA

Examiner

Manish S. Shah

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Iijima (# JP 09-277561).

Iijima discloses a pressure absorbing apparatus (element: 5, 5f, figure: 1-2) to be disposed between a tank for a liquid (element: 3; figure: 1-2) and an ejecting head (element: 2; figure: 1-2) that ejects the liquid from the tank onto an ejection object, the pressure absorbing apparatus comprising: a droplet inlet configured to be fluidly connected to the tank (element: 4; figure: 1-2); a pair of droplet outlets configured to be fluidly connected to the ejecting head (element: 5e; figure: 1); a channel fluidly connecting the droplet inlet to the pair of droplet outlets; and a pressure absorbing portion in communication with the channel, the pressure absorbing portion connected to the pair of droplet outlet in a bifurcated manner (figure: 1 & 2); the pressure absorbing apparatus absorbing the pressure fluctuations in the liquid being fed from the tank to the ejecting head, at least surfaces of the droplet inlet, the droplet outlet, the channel, and the pressure absorbing portion that are arranged to contact the liquid being formed of a corrosion-resistant material that resists corrosion by the liquid (figure: 1-7; [0011]-

[0015]), wherein the corrosion-resistant material is at least one material selected from the group consisting of polyethylene, polypropylene ([0013]).

2. Claims 3-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Iijima (# JP 09-277561).

Iijima discloses an ejector apparatus (figure: 4) including a tank (element: 3; figure: 1-2) that feeds a liquid; an ejecting head (element: 2, figure: 1-2) that ejects the liquid fed from the tank onto an ejection object; and the pressure absorbing apparatus (element: 5, figure: 1-2) comprising: a droplet inlet configured to be fluidly connected to the tank (element: 4; figure: 1-2); a pair of droplet outlets configured to be fluidly connected to the ejecting head (element: 5e; figure: 1); a channel fluidly connecting the droplet inlet to the pair of droplet outlets; and a pressure absorbing portion in communication with the channel, the pressure absorbing portion connected to the pair of droplet outlet in a bifurcated manner (figure: 1 & 2); the pressure absorbing apparatus absorbing the pressure fluctuations in the liquid being fed from the tank to the ejecting head, at least surfaces of the droplet inlet, the droplet outlet, the channel, and the pressure absorbing portion that are arranged to contact the liquid being formed of a corrosion-resistant material that resists corrosion by the liquid (figure: 1-7; [0011]-[0015]), wherein the corrosion-resistant material is at least one material selected from the group consisting of polyethylene, polypropylene ([0013]). They also disclose that the ejection head and the droplet outlet of the pressure absorbing apparatus are linked via rubber busing (element: 8, figure: 1-3; [0013]) having at least a surface of the rubber

Art Unit: 2853

busing arranged to contact with the liquid being formed of corrosion resistant material, wherein corrosion resistant material is elastomer or silicone rubber ([0013]-[0015]).

3. Claims 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Iijima (# JP 09-277561).

Iijima discloses a method of manufacturing a device including providing a substrate; and ejecting material toward the substrate to form a layer of material above the substrate; the ejecting of the material being performed by an ejector apparatus (figure: 1-4) including a tank (element: 3; figure: 1-2) that feeds a liquid; an ejecting head (element: 2, figure: 1-2) that ejects the liquid fed from the tank onto an ejection object; and the pressure absorbing apparatus (element: 5, figure: 1-3) comprising: a droplet inlet configured to be fluidly connected to the tank (element: 4; figure: 1-2); a pair of droplet outlets configured to be fluidly connected to the ejecting head (element: 5e; figure: 1); a channel fluidly connecting the droplet inlet to the pair of droplet outlets; and a pressure absorbing portion in communication with the channel, the pressure absorbing portion connected to the pair of droplet outlet in a bifurcated manner (figure: 1 & 2); the pressure absorbing apparatus absorbing the pressure fluctuations in the liquid being fed from the tank to the ejecting head, at least surfaces of the droplet inlet, the droplet outlet, the channel, and the pressure absorbing portion that are arranged to contact the liquid being formed of a corrosion-resistant material that resists corrosion by the liquid (figure: 1-7; [0011]-[0015]), wherein the corrosion-resistant material is at least one material selected from the group consisting of polyethylene, polypropylene ([0013]).

Art Unit: 2853

They also disclose that the ejection head and the droplet outlet of the pressure absorbing apparatus are linked via rubber busing (element: 8, figure: 1-3; [0013]) having at least a surface of the rubber busing arranged to contact with the liquid being formed of corrosion resistant material, wherein corrosion resistant material is elastomer or silicone rubber. ([0013]-[0015]).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al. (# US 6628430) in view of Iijima (# JP 09-277561).

Silverbrook et al. discloses a hand held mobile phone device with integral internal inkjet printing apparatus (figure: 1-16) includes a substrate; ejecting material toward the substrate to form a layer of the material, the ejecting of the material being performed by an ejector apparatus (figure: 1-10). They also disclose that the device has an electro optical device including an electro luminescence element (figure: 1-10, 16).

Silverbrook et al. differs from the claim of the present invention in that the a tank that feeds a liquid; an ejecting head that ejects the liquid fed from the tank onto an ejection object; and the pressure absorbing apparatus comprising: a droplet inlet

Art Unit: 2853

configured to be fluidly connected to the tank; a pair of droplet outlets configured to be fluidly connected to the ejecting head; a channel fluidly connecting the droplet inlet to the pair of droplet outlets; and a pressure absorbing portion in communication with the channel, the pressure absorbing portion being connected to the pair of droplet outlets in a bifurcated manner; the pressure absorbing apparatus absorbing the pressure fluctuations in the liquid being fed from the tank to the ejecting head, at least surfaces of the droplet inlet, the droplet outlet, the channel, and the pressure absorbing portion that are arranged to contact the liquid being formed of a corrosion-resistant material that resists corrosion by the liquid.

Iijima teaches to get the high quality printing image with uniform ejection, an ejector apparatus (figure: 1-4) including a tank (element: 3; figure: 1-2) that feeds a liquid; an ejecting head (element: 2, figure: 1-2) that ejects the liquid fed from the tank onto an ejection object; and the pressure absorbing apparatus (element: 5, figure: 1-3) comprising: a droplet inlet configured to be fluidly connected to the tank (element: 4; figure: 1-2); a pair of droplet outlets configured to be fluidly connected to the ejecting head (element: 5e; figure: 1); a channel fluidly connecting the droplet inlet to the pair of droplet outlets; and a pressure absorbing portion in communication with the channel, the pressure absorbing portion connected to the pair of droplet outlet in a bifurcated manner (figure: 1 & 2); the pressure absorbing apparatus absorbing the pressure fluctuations in the liquid being fed from the tank to the ejecting head, at least surfaces of the droplet inlet, the droplet outlet, the channel, and the pressure absorbing portion that are arranged to contact the liquid being formed of a corrosion-resistant material that

resists corrosion by the liquid (figure: 1-7; [0011]-[0015]), wherein the corrosion-resistant material is at least one material selected from the group consisting of polyethylene, polypropylene ([0013]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the electronic apparatus of Silverbrook et al. by the aforementioned teaching of Iijima in order to have the uniform flow of ink, which gives high quality printed image.

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.



Art Unit: 2853

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manish S. Shah whose telephone number is (571) 272-2152. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Manish S. Shah  
Primary Examiner  
Art Unit 2853

MSS

6/23/05